

Translation

PATENT COOPERATION TREATY

PCT/EP2003/009020



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

22 FEB 2005

Applicant's or agent's file reference 2002/CVG029	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/009020	International filing date (day/month/year) 14 August 2003 (14.08.2003)	Priority date (day/month/year) 29 August 2002 (29.08.2002)
International Patent Classification (IPC) or national classification and IPC C08G 73/18		
Applicant PEMEAS GmbH		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 18 March 2004 (18.03.2004)	Date of completion of this report 22 November 2004 (22.11.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

Intern application No.

PCT/EP2003/009020

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
 pages 1-25, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the claims:
 pages 1-24, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the drawings:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 03/09020

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims		YES
	Claims	1 - 24	NO
Inventive step (IS)	Claims		YES
	Claims	1 - 24	NO
Industrial applicability (IA)	Claims	1 - 24	YES
	Claims		NO

2. Citations and explanations

1. This report makes reference to the following documents:

D1: US5633337

D2: EP0265921

D3: XP00490475

D4: DE1301578

D5: WO9425506

2. Certain published documents (PCT Rule 70.10)

WO03022412, published on 20 March 2003, filed on 29 August 2002, with priority date of 12 September 2001
WO02088219, published on 7 November 2002, filed on 9 April 2002, with priority date of 9 April 2001
WO02081547, published on 17 October 2002, filed on 9 April 2002, with priority date of 9 April 2001

The citations do not constitute prior art under PCT Article 33(2); the documents are cited under PCT Rule 70.10 because they also relate to the subject matter of the present application.

3. Example XIX of document D1 discloses the preparation

of a polyazole in polyphosphoric acid from a tetraamine/dicyanide. Example XX discloses the production of films.

Example II of document D2 discloses the preparation of a polyazole from a tetraamine/diphenyl isophthalate. A thin foil is then produced therefrom (see page 9, lines 2-4).

Although documents D1 and D2 differ from the preparation process according to the present application, the application does not demonstrate that the polymer foils therein differ structurally from the polymer foils in documents D1 and D2.

Consequently, documents D1 and D2 are prejudicial to the novelty of the subject matter of claims 1-21 of the present application.

4. Poly(p-phenylene benzobis(imidazole) (PBZI) is produced in document D3 by reaction of a tetraamine and a dicarboxylic acid in the presence of polyphosphoric acid (PPA) (see page 1173, right-hand column, lines 36-39; diagram 2).

Consequently, document D3 is prejudicial to the novelty of the subject matter of claim 21 of the present application.

5. Example 1 of document D4 discloses the production of a polymer from tetraaminodiphenyl-tetrahydrochloride and isophthalamide in the presence of PPA.

Consequently, document D4 is prejudicial to the novelty of the subject matter of claim 21 of the

present application.

6. Example IX of document D5 discloses the production of fibres (extrusion) based on the reaction product of tetraaminopyridinium-dihydroxyterephthalate in polyphosphoric acid (see example IV).

Consequently, document D5 is prejudicial to the novelty of the subject matter of claims 22-24 of the present application.